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HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

PANTOLIANO JR, RICHARD

ART UNIT PAPER NUMBER

2194

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--|---|--|
| Office Action Summary | Application No. 10/681,783 | Applicant(s) GIMEIFARB ET AL. | |
| | Examiner Richard Pantoliano Jr | Art Unit 2194 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers


- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20031008.


WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____

DETAILED ACTION

1. This is the initial office action for Application# **10/681,783** filed on **08 October 2003**. **Claims 1-29** are currently pending and have been considered below.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 18-29** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. Software constitutes "functional descriptive material". Functional descriptive material consists of data structures and computer programs which impart functionality when employed as a computer component. Functional descriptive material is nonstatutory when claimed as descriptive material *per se*. *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.

5. All of the "modules" claimed in **Claims 18-23** can be implemented only as software according to page 4, para. 14 of Applicant's disclosure. Therefore, the claims as currently stated are directed to software *per se* and, therefore, encompass nonstatutory subject matter.

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6. **Claims 24-29** are not limited to tangible embodiments. In view of Applicant's disclosure, specification **page 15, para. [46]**, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., magnetic and optical medium) and intangible embodiments (e.g., electrical medium and modulated carrier signals transmitted over a network). As such, the claim is not limited to statutory subject matter and is therefore nonstatutory.
7. To overcome this type of 101 rejection the claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Libes (Don Libes. *Exploring Expect: A TCL-based Toolkit for Automating Interactive Programs*. O'Reilly Media Inc., 1995) in view of Suchenwirth (Richard Suchenwirth. "Dynamic Variable Scoping". Accessed at //mini.net/tclrevs/2775.1 . Dated: 17 December 2001)

10. As per **Claim 1**, Libes discloses the invention substantially as claimed including a method, comprising the step of obtaining a value (*pg. 97, para. 5*) (*The 'expect "alive" ' source code statement satisfies this claim limitation*). Libes does not disclose obtaining a value of one or more values from one or more nested procedures, for a variable that is undefined within one procedure that is nested within the one or more nested procedures.

11. Suchenwirth discloses the invention substantially as claimed including a method, comprising the step of obtaining a value, of one or more values from one or more nested procedures, for a variable that is undefined within one procedure that is nested within the one or more nested procedures (*para. 1*) (*"Dynamic scoping" meets this claim limitation*).

12. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the dynamic variable scoping teachings of Suchenwirth with the expect statement timeout teachings of Libes. One would have been motivated by the need to simplify environmental variable management on systems that allow for the maintainance and customization of such information. Many applications support a plethora of style and presentation features, which must be programmed in some way.

13. Without dynamic scope, programming these kinds of features must be done explicitly in terms of the implementation language. Usually, objects are loaded up with fields or methods that implement these features, or methods and functions have multiple parameters (perhaps with defaults). Indeed, an argument for optional, keyword-style formal parameters with defaults is that they cater to this kind of programming

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problem. In extreme cases, programmers move these fields or parameters into an object, which is passed as a parameter nearly everywhere. Methods are called to read, write, save, and restore these data. This popular approach usually simplifies the code considerably. It is also tantamount to implementing a set of variables with dynamic scope. The use of dynamic scoping would avoid the need to pass parameters in this fashion and allow for a desired timeout value to be maintained only within a specific chain of called procedures, rather than affecting the entire environment maintained by the program.

14. As per **Claim 2**, Suchenwirth further discloses the step of automatically determining the value from the one or more nested procedures (*para. 4*) (*The ability of dynamic scoping to "shadow" the outer variables meets this claim limitation*).

15. As per **Claim 3**, Suchenwirth further discloses assigning the value to the variable that is undefined within the one procedure (*para. 3 and 4*) (*The variables "self" and "nowhere" are not defined in previous procedures, so they are defined locally. In the TCL scripting language, all variables contain the "empty string" as a default value*).

16. As per **Claim 4**, Suchenwirth further discloses:

a) establishing a procedure hierarchy that comprises the one procedure and the one or more nested procedures (*para. 1*) (*The TCL language inherently creates a hierarchy when one procedure calls another*); and

b) determining from the procedure hierarchy the value for the variable that is undefined within the one procedure (*para. 1*) (*The “uplevel” command allows for the traversal of the hierarchy*).

17. As per **Claim 5**, Suchenwirth further discloses wherein the value of the variable that is undefined in the one procedure comprises a most recently defined value in relation to the one procedure, wherein the step of determining comprises the steps of:

- a) traversing the procedure hierarchy (*para. 1 and 2*);
- b) identifying from the procedure hierarchy, the most recently defined value in relation to the one procedure (*para. 1-4*); and
- c) returning to the one procedure, the most recently defined value in relation to the one procedure (*para. 1-4*).

18. As per **Claim 6**, this claim is rejected for the same reasoning as **Claim 5** above.

19. As per **Claim 7**, this claim is rejected for the same reasoning as **Claim 6** above.

20. As per **Claim 8**, this claim is rejected for the same reasoning as **Claim 5** above.

21. As per **Claim 9**, Libes discloses limiting to a value, a duration of time to wait for one or more responses associated with the one or more expect statements (*pg. 74*,

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para. 2 – p75, pg. 97, para. 5, and pg. 144) (The “set” command is used to set the timeout value of the expect statement).

22. As per **Claim 10**, Libes further discloses the steps of:

a) determining an expiration of the duration of time to wait for the one or more responses associated with the one or more expect statements (pg. 75, pg. 97 and pg. 144) (The “set timeout” statements listed in the source code samples meet this claim limitation);

b) associating the value of the variable that is undefined within the one procedure with the one or more expect statements of the one or more expect statements (pg. 75, pg. 97 and pg. 144) (The “set timeout” statements listed in the source code samples specifically sets the timeout value);

c) maintaining a timer associated with the one expect statement (pg. 75, pg. 97 and pg. 144) (The “expect” statements inherently start a timer that will wait for “timeout” number of seconds); and

d) evaluating the timer to determine the expiration of the duration of time associated with the one expect statement (pg. 75, pg. 97 and pg. 144) (The “expect” statements inherently start a timer that will wait for “timeout” number of seconds. This timer is automatically utilizes the timeout variable to determine how long it should wait before continuing execution).

23. Suchenwirth discloses wherein that value used could be undefined within the one procedure. (*para. 1) (“Dynamic scoping” meets this claim limitation)*

24. As per **Claim 11**, Libes further discloses:

- a) executing the one or more expect statements (pg. 97, para. 5, line 3);
- b) waiting for the one or more responses associated with the one or more expect statements (pg.97, para. 5, line 2); and
- c) executing one or more actions associated with the one or more expect statements upon failure to receive the one or more responses before an expiration of a duration of time (pg. 97, para. 5, lines 3-6) (The statements enclosed by braces following the "timeout" statement will be executed upon expiration of the timeout value).

25. As per **Claim 12**, Libes further discloses the steps of:

- a) invoking a program that comprises one or more expect statements from a host system (pg. 144) (The "while" statement executes the "connect" procedure);
- b) establishing a communication with a remote system (pg. 144) (The "spawn ftp -i" statement establishes the connection to a remote system);
- c) executing on the remote system one or more commands associated with the one or more expect statements of the program (pg. 144) (The "send" statements used in the "connect" procedure execute commands on the remote system);
- d) receiving one or more responses associated with the one or more commands before an expiration of a duration of time to wait for the one or more responses (pg. 144)(The "expect" statements satisfy this limitation); and

e) processing the one or more responses (pg. 144)(The statements enclosed in braces after the “expect” statements satisfy this limitation).

26. As per **Claim 13**, Libes further discloses wherein the program comprises the one procedure and the one or more nested procedures, wherein the one procedure comprises the one expect statement, wherein the step of invoking comprises the steps of:

- a) executing from the program, the one procedure (pg. 144) (The “while” statement executes the “connect” procedure);
- b) invoking an expect module upon executing the one expect statement (pg. 144) (The “expect” statement is executed from within the “connect” procedure);
- c) obtaining the value for the variable that is undefined within the one procedure from the one or more nested procedures;
- d) associating the value for the variable that is undefined within the one procedure with the one expect statement; and
- e) limiting to the value for the variable that is undefined within the one procedure, the duration of time to wait for the one or more responses from the remote system.

Suchenwirth discloses wherein the value of the variable can be undefined within the one procedure with the one expect statement (*para. 1*) (“*Dynamic scoping*” meets *this claim limitation*).

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27. As per **Claims 14-17**, these claims are rejected for the same reasoning as **Claims 1, 5 and 13**.

28. As per **Claim 18**, being the apparatus implementing the method of **Claim 1**, this claim is rejected for the same reasoning as **Claim 1** above.

29. As per **Claim 19**, this claim is rejected for the same reasoning as **Claim 5** above.

30. As per **Claim 20**, this claim is rejected for the same reasoning as **Claims 5 and 9** above.

31. As per **Claims 21-23**, these claims are rejected for the same reasoning as **Claim 20** above.

32. As per **Claim 24**, being the computer-readable medium containing means for performing the method of **Claim 1**, this claim is rejected for the same reasoning as **Claim 1** above.

33. As per **Claim 25**, this claim is rejected for the same reasoning as **Claims 1 and 3** above.

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34. As per **Claim 26-28**, this claim is rejected for the same reasoning as **Claims 1, 4 and 5** above.

35. As per **Claim 29**, this claim is rejected for the same reasoning as **Claims 1, 5, and 9** above.

Conclusion

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Hanson et al (US PG PUB: 2003/0110470) and Aho et al (Alfred V. Aho, Ravi Sethi, and Jeffrey D. Ullman. Compilers: Principles, Techniques and Tools. Reading, Massachusetts: Bell Telephone Laboratories, Inc., 1986).


37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Pantoliano Jr whose telephone number is (571) 270-1049. The examiner can normally be reached on Monday-Thursday, 8am - 4 pm EST.

38. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571)272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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39. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RP
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WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER